

EDUCATIONAL STATISTICS -- EDP 557 -- SPRING 2000

Instructor: Doris Stilwell, Ph.D.

Office: 13 DH (basement)

Office Hours: Wednesday: 1 - 3:00

Thursday: 2:15 - 4:15

After class & by appointment

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I. Nature of the course:

The principle aim of EDP 557 is to enhance each student's understanding and effective use of basic statistical techniques employed in research in education and the social sciences generally. The course is not designed to produce the sophistication in statistics, computer programming, or psychometric applications needed by a producer of research. Rather it is an introductory course intended to develop students' competence in the application of the basic statistical techniques used in summarizing and analyzing research data.

II. Competency goals of the course:

1. An understanding of the concepts, methods and symbols of elementary statistics;
2. The ability to read, understand and critique research statistics;
3. The ability to plan and carry out simple statistical analyses; and
4. A beginning understanding of some of the assumptions, limitations and abuses of statistics.

III. Course activities:

1. Read and study the textbook and assigned readings;
2. Do homework and computer assignments and be prepared to discuss in class;
3. Work out the problems in Mastery Tests at the end of each chapter and keep in a Notebook to be turned in at the time of the mid-term and final exam.
4. Take a mid-term and a final examination.

IV. Grading: A = 90 and above, B = 83 - 89, C = 76 - 82, D = 70 - 75

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| 1. Mid-term | - 30% |
| 2. Final examination | - 40% |
| 3. Homework (4 assignments - 2 points each) * | - 8% |
| 4. Mastery Test Notebook * | - 10% |
| 5. Computer Activities* | - 12% |

*** Points will be deducted for late or incomplete work**

One point will be subtracted from your final grade for each Absence.

Note: The use of a calculator is encouraged - in class, for homework and for exams.

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V. Required Text: Glass, G. V. and Hopkins, K. D. (1996). Statistical methods in education and psychology (3rd ed.). Boston: Allyn and Bacon.

Other readings as assigned

VI. Course outline:

1/18(19)	Introduction, preview of the course, syllabus, and Summation Notation	Handout
	Homework I	
		<u>Text</u>
1/25(26)	Variables, Measurement, Scales (Mastery Test 2: all) Frequency Distributions and Visual Displays of Data	Chapters 1, 2 Chapter 3 (3.1 - 3.8)
2/1(2)	Finish Visual Displays of Data Measures of Central Tendency (Mastery Test 3: skip 13-16) and (Mastery Test 4: all)	Chapter 3 (3.9 - end) Chapter 4
2/8(9)	Measures of Variability (Mastery Test 5: all) Begin: The Normal Distribution & Standard Scores	Chapter 5 Chapter 6
2/15(16)	Finish: The Normal Distribution & Standard Scores (Mastery Test 6: 1 thru 21, Ans. # 12 = 71.675) Begin: Correlation: Measurement of Relationship Between Two Variables	Chapter 6 Chapter 7
	Homework II (Mastery Test 7: 1-22)	
2/22(23)	Finish: Correlation: Measurement of Relationship Between Two Variables Review for mid-term	Chapter 7
2/29(3/1)	Mid-term exam	
3/7(8)	Regression and Prediction (thru 8.11) (Mastery Test 8: 1-21)	Chapter 8
3/14(15)	Spring Break - No Class	
3/21(22)	Probability - Homework III (Mastery Test 9: all)	Chapter 9
3/28(29)	Statistical Inference: Sampling and Interval Estimation (Mastery Test 10: 1-27)	Chapter 10
4/4(5)	Introduction to Hypothesis Testing Homework IV (Mastery Test 11: 1-33)	Chapter 11
4/11(12)	Inferences about the Differences between means (Mastery Test 12: 1 thru 23)	Chapter 12
4/18(19)	Statistics for Categorical Dependent Variables.... Catch-up and Review for Final	Chapter 13
4/25(26)	AERA -- no class	

FINAL EXAM: For Tuesday Class -- Tuesday, 5/2 @ 3:30 pm as per exam schedule
For Wednesday Class -- Wednesday, 5/3 @ 3:30 pm as per exam schedule